

<b>Substitute Form 1449A/PTO</b> (Modified)  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		<b>Complete if Known</b>			
		Application Number	10/823,502		
		Filing Date	April 12, 2004		
		First Named Inventor	TAO, Chunlin		
		Art Unit	1645		
		Examiner Name	FREDMAN, Jeffrey N.		
Sheet	1	of	12	Attorney Docket Number	A-69306-2 (463037-00324)

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1	4,704,193	11-03-1987	Bowers et al.	
	A2	4,707,352	11-17-1987	Stavrianopoulos	
	A3	4,707,440	11-17-1987	Stavrianopoulos	
	A4	4,711,955	12-08-1987	Ward et al.	
	A5	4,755,458	07-05-1988	Rabbani et al.	
	A6	4,787,963	11-29-1989	MacConnell	
	A7	4,840,893	06-20-1989	Hill et al.	
	A8	4,849,513	07-18-1989	Smith et al.	
	A9	4,868,103	09-19-1989	Stavrianopoulos et al.	
	A10	4,882,013	11-21-1989	Turner et al.	
	A11	4,894,325	01-16-1990	Englehardt et al.	
	A12	4,943,523	07-24-1990	Stavrianopoulos	
	A13	4,945,045	07-31-1990	Forrest et al.	
	A14	4,952,685	08-28-1990	Stavrianopoulos	
	A15	4,964,972	10-23-1990	Sagiv et al.	
	A16	4,994,373	02-19-1991	Stavrianopoulos	
	A17	5,002,885	03-26-1991	Stavrianopoulos	
	A18	5,013,831	05-07-1991	Stavrianopoulos	
	A19	5,066,372	11-19-1991	Weetall	
	A20	5,082,830	01-21-1992	Brakel et al.	
	A21	5,089,112	02-18-1992	Skotheim et al.	
	A22	5,156,810	10-20-1992	Ribi	
	A23	5,175,269	12-29-1992	Stavrianopoulos	
	A24	5,180,968	01-19-1993	Bruckenstein et al.	
	A25	5,241,060	08-31-1993	Englehardt et al.	
	A26	5,242,828	09-07-1993	Bergström et al.	
	A27	5,278,043	01-11-1994	Bannwarth et al.	
	A28	5,312,527	05-17-1994	Mikkelsen et al.	
	A29	5,328,824	07-12-1994	Ward et al.	
	A30	5,356,786	10-18-1994	Heller et al.	
	A31	5,391,272	02-21-1995	O'Daly et al.	
	A32	5,403,451	04-04-1995	Riviello et al.	
	A33	5,436,161	07-25-1995	Bergström et al.	
	A34	5,443,701	08-22-1995	Willner et al.	

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G	A35	5,449,767	09-12-1995	Ward et al.	
	A36	5,472,881	12-05-1995	Beebe et al.	
	A37	5,476,928	12-19-1995	Ward et al.	
	A38	5,491,097	02-13-1996	Ribi et al.	
	A39	5,552,270	09-03-1996	Khrapko et al.	
	A40	5,565,552	10-15-1996	Magda et al.	
	A41	5,571,568	11-05-1996	Ribi et al.	
	A42	5,573,906	11-12-1996	Bannwarth et al.	
	A43	5,591,578	01-07-1997	Meade et al.	
	A44	5,595,908	01-21-1997	Fawcett et al.	
	A45	5,601,982	02-11-1997	Sargent et al.	
	A46	5,620,850	04-15-1997	Bamdad et al.	
	A47	5,622,821	04-22-1997	Selvin et al.	
	A48	5,632,957	05-27-1997	Heller et al.	
	A49	5,650,061	07-22-1997	Kuhr et al.	
	A50	5,700,667	12-23-1997	Marble et al.	
	A51	5,705,346	01-06-1998	Okamoto et al.	
	A52	5,705,348	01-06-1998	Meade et al.	
	A53	5,741,700	04-21-1998	Ershov et al.	
	A54	5,756,050	05-26-1998	Ershov et al.	
	A55	5,770,369	06-23-1998	Meade et al.	
	A56	5,770,721	06-23-1998	Ershov et al.	
	A57	5,776,672	07-07-1998	Hashimoto et al.	
	A58	5,780,234	07-14-1998	Meade et al.	
	A59	5,795,453	08-18-1998	Gilmartin	
	A60	5,824,473	10-10-1998	Meade et al.	
	A61	5,837,859	11-17-1998	Teoule et al.	
	A62	5,849,486	12-15-1998	Heller et al.	
	A63	5,851,772	12-22-1998	Mirzabekov et al.	
	A64	5,952,172	09-14-1999	Meade et al.	
	A65	5,976,802	11-02-1999	Ansorge et al.	
	A66 †	6,013,170	01-11-2000	Meade	
	A67 †	6,060,256	05-09-2000	Everhart et al.	
	A68 †	6,013,459	01-11-2000	Meade	

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G	A69	6,071,699	06-06-2000	Meade et al.	
	A70	6,087,100	07-11-2000	Meade et al.	
	A71	6,090,933	07-18-2000	Kayyem et al.	
	A72	6,096,273	08-01-2000	Kayyem et al.	
	A73 †	6,096,497	08-01-2000	Bauer	
	A74	6,177,250	01-23-2001	Meade et al.	
	A75	6,180,352	01-30-2001	Meade et al.	
	A76	6,200,761 B1	03-13-2001	Meade et al.	
	A77	6,221,583 B1	04-24-2001	Kayyem et al.	
	A78	6,232,062 B1	05-15-2001	Kayyem et al.	
	A79	6,238,870 B1	05-29-2001	Meade et al.	
	A80 †	6,248,229 B1	06-19-2001	Meade	
	A81	6,258,545 B1	07-10-2001	Meade et al.	
	A82	6,268,149 B1	07-31-2001	Meade et al.	
	A83	6,268,150 B1	07-31-2001	Meade et al.	
	A84	6,277,576 B1	08-21-2001	Meade et al.	
	A85 †	6,479,240 B1	11-12-2002	Kayyem	
	A86 †	6,495,323 B1	12-17-2002	Kayyem et al.	
	A87 †	6,528,266 B1	03-04-2003	Meade et al.	
	A88 †	6,600,026 B1	07-29-2003	Yu	
	A89 †	2001-0034033 A1	10-25-2001	Meade et al.	
	A90 †	2002-0009810 A1	01-24-2002	Kayyem et al.	
	A91 †	2002-0033345 A1	03-21-2002	Meade	
	A92 †	2003-0003473 A1	01-02-2003	Kayyem et al.	
	A93 †	2003-0148328 A1	08-07-2003	Kayyem et al.	
	A94 †	2003-0150723 A1	08-14-2003	Kayyem et al.	
	A95 †	2003-0170677 A1	09-11-2003	Meade et al.	
	A96 †	2004-0101890 A1	05-27-2004	Meade et al.	

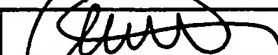
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G	B1	CA 2 090 904	09-01-1993	Hoffman La Roche	
	B2	EP 0 063 879 A2	11-03-1982	Yale University	
Examiner Signature				Date Considered	2/27/08

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	B3	EP 0 229 943 B1	07-29-1987	Molecular Biosystems Inc.		
	B4	EP 0 234 938 A2	02-09-1987	Cranfield Institute of Technology		
	B5	EP 0 515 615 A2	09-02-1996	Boehringer Mannheim		
	B6	EP 0 599 337 A2	01-06-1994	Canon K.K.		
	B7	JP 63-238166 A	10-04-1988	Mitsubishi Corp.		
	B8	JP 6-41183 A	02-15-1994	Mitsubishi Chemical		
	B9	WO 86/05815 A1	10-09-1986	Genetic International, Inc.		
	B10	WO 90/05303 A1	05-31-1990	Pharmacia AB		
	B11	WO 90/05732 A1	05-31-1990	The Trustees of Columbia University in the City of New York		
	B12	WO 92/10757 A1	06-25-1992	Boehringer Mannheim		
	B13	WO 93/10267 A1	05-27-1993	Igen, Inc.		
	B14	WO 93/22678 A1	11-11-1993	Baylor College of Medicine		
	B15	WO 94/22889 A1	10-13-1994	Cis Bio International		
	B16	WO 95/15971 A2/A3	06-15-1995	California Institute of Technology		
	B17	WO 96/40712 A1	12-19-1996	California Institute of Technology		
	B18	WO 97/01646 A2/A3	01-16-1997	University of North Carolina		
	B19	WO 97/27329 A1	07-31-1997	University of Chicago		
	B20	WO 97/31256 A1	08-28-1997	Cornell Research Foundation		
	B21	WO 97/41425 A1	11-06-1997	Pence, Inc.		
	B22	WO 97/44651 A1	11-27-1997	Australian Membrane and Biotechnology Institute		
	B23	WO 97/46568 A1	12-11-1997	California Institute of Technology		
	B24	WO 98/04740 A1	02-05-1998	Northwestern University		
	B25	WO 98/12539 A1	03-26-1998	Meso Scale Technologies, LLC		
	B26	WO 98/20162 A2/A3	05-14-1998	Clinical Micro Sensors, Inc.		
	B27	WO 98/27229 A1	06-25-1998	University of Chicago		
	B28	WO 98/28444 A2/A3	07-02-1998	University of Chicago		
	B29	WO 98/31839 A2/A3	07-23-1998	President & Fellows of Harvard College		

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G ↓	B30	WO 98/35232 A2/A3	08-13-1998	University of North Carolina		
	B31	WO 98/51823 A1	11-19-1998	Mosaic Technologies, Inc.		
	B32	WO 98/57158 A1	12-18-1998	Clinical Micro Sensors, Inc.		
	B33	WO 98/57159 A1	12-17-1998	Clinical Micro Sensors, Inc.		
	B34	WO 99/14596 A1	03-25-1999	AB Sangtec Medical		
	B35	WO 99/29711 A1	06-17-1999	Nanogen, Inc.		
	B36	WO 99/37819 A2/A3	07-29-1999	Clinical Micro Sensors, Inc.		
	B37	WO 99/57317 A1	11-11-1999	Clinical Micro Sensors, Inc.		
	B38	WO 99/57319 A1	11-11-1999	Clinical Micro Sensors, Inc.		
	B39	WO 99/67425 A2/A3	12-29-1999	Clinical Micro Sensors, Inc.		

NON PATENT LITERATURE DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date; page(s), volume-issue number(s), publisher, city and/or country where published.				T <sup>5</sup>
G ↓	C1	Aizawa et al., "Integrated Molecular Systems for Biosensors," Sensors and Actuators B (Nos 1/3) Part 1:1-5 (March 1995).				
	C2	Albers et al., "Design of Novel Molecular Wires for Realizing Long-Distance Electron Transfer," Biochemistry and Bienergetics, 42:25-33 (1997)				
	C3	Alleman, K.S., et al., Electrochemical Rectification at a Monolayer-Modified Electrode," J. Phys. Chem., 100:17050-17058 (1996).				
	C4	Anonymous, "Biotechnology and Genetics: Genetic Screening Integrated Circuit," The Economist (February 25-March 3, 1995)				
	C5	Arkin et al., "Evidence for Photoelectron Transfer Through DNA Intercalation," J. Inorganic Biochem. Abstracts, 6 <sup>th</sup> International Conference on Bioinorganic Chemistry, 51(1) & (2):526 (1993).				
	C6	Bain et al., "Formation of Monolayers by the Coadsorption of Thiols on Gold: Variation in the Length of the Alkyl Chain," J. Am. Chem. Soc. 111:7164-7175 (1989).				
	C7	Bamdad, C. "A DNA self-assembled monolayer for the specific attachment of unmodified double - or single stranded DNA," Biophysical Journal, 75:1997-2003 (1998).				
	C8	Barisci et al., "Conducting Polymer Sensors," TRIP, 4(9):307-311 (1996).				
	C9	Baum, R. M., "Views on Biological, Long-Range Electron Transfer Stir Debate," C&EN, pp 20-23 (1993)				
	C10	Beattie et al., "Genosensor Technology," Clinical Chemistry, 39(4): 719-722 (1993).				
	C11	Bechtold, R., et al., "Ruthenium-Modified Horse Heart Cytochrome c: Effect of pH and Ligation on the Rate of Intramolecular Electron Transfer between Ruthenium(II) and Heme(III)," J. Phys. Chem., 90(16):3800-3804 (1986).				

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			Art Unit	1645	
			Examiner Name	FREDMAN, Jeffrey N.	
Sheet	6	of	12	Attorney Docket Number	A-69306-2 (463037-00324)

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G	C12	Bidan, "Electroconducting conjugated polymers: new sensitive matrices to build up chemical or electrochemical sensors. A Review," Sensors and Actuators, B6:45-56 (1992).		
	C13	Blonder et al., "Three-dimensional Redox-Active layered Composites of Au-Au, Ag-Ag and Au-Ag Colloids," Chem. Commun. 1393-1394 (1998).		
	C14	Boguslavsky, L. et al., "Applications of redox polymers in biosensors," Solid State Ionics, 60:189-197 (1993).		
	C15	Boon et al., "Mutation Detection by Electrocatalysis at DNA- Modified Electrodes," Nature Biotechnology, 18: 1096-1100 (October 2000).		
	C16	Bowler, B. E., et al., "Long-Range Electron Transfer in Donor (Spacer) Acceptor Molecules and Proteins," Progress in Inorganic Chemistry: Bioinorganic Chemistry, 38:259-322 (1990).		
	C17	Chang, I-Jy, et al., "High-Driving-Force Electron Transfer in Metalloproteins: Intramolecular Oxidation of Ferrocyclochrome c by Ru(2,2'-bpy)2(im)(His-33)3+," J. Am. Chem. Soc., 113:7056-7057 (1991).		
	C18	Chidsey, C.E.D., et al., "Free Energy and Temperature Dependence of Electron Transfer at the Metal Electrolyte Interface," Science, 251:919-922 (1991).		
	C19	Chrisey, et al., "Covalent attachment of synthetic DNA to self-assembled monolayer films," Nucleic Acids Research, 24(15):3031-3039 (1996).		
	C20	Clery, "DNA Goes Electric," Science, 267:1270 (1995).		
	C21	Commerce Business Daily Issue of September 26, 1996 PSA#1688.		
	C22	Davis, L. M., et al., "Electron Donor Properties of the Antitumour Drug Amsacrine as Studied by Fluorescence Quenching of DNA-Bound		
	C23	Davis, L. M., et al., "Elements of biosensor construction," Enzyme Microb. Technol. 17:1030-1035 (1995).		
	C24	Degani et al., "Direct Electrical Communication between Chemically Modified Enzymes and Metal Electrodes. 2. Methods for Bonding Electron-Transfer Relays to Glucose Oxidase and D-Amino-Acid Oxidase," J. Am. Chem. Soc. 110:2615-2620 (1988).		
	C25	Degani, Y., et al., "Direct Electrical Communication between Chemically Modified Enzymes and Metal Electrodes. 1. Electron Transfer from Glucose Oxidase to Metal Electrodes via Electron Relays, Bound Covalently to the Enzyme," J. Phys. Chem., 91(6):1285-1288 (1987)		
	C26	Degani, Y., et al., "Electrical Communication between Redox Centers of Glucose Oxidase and Electrodes via Electrostatically and Covalently Bound Redox Polymers," J. Am. Chem. Soc., 111:2357-2358 (1989).		
	C27	Deinhammer, R.S., et al., "Electrochemical Oxidation of Amine-containing compounds: A Route to the Surface Modification of glassy carbon electrodes," Langmuir, 10:1306-1313 (1994).		
	C28	Deinhammer, R.S., et al., "Electrochemical Oxidation of Amine-containing compounds: A Route to the Surface Modification of glassy carbon electrodes," Langmuir, 10:1306-1313 (1994).		
	C29	Dubiley, S. et al., "Fractionation, phosphorylation and Ligation on Oligonucleotide Microchips to Enhance Sequencing by Hybridization," Nucleic Acids Research, 25(12):2259-2265 (1997).		
	C30	Durham, B., et al., "Electron-Transfer Kinetics of Singly Labeled Ruthenium(II) Polypyridine Cytochrome c Derivatives," Advances in Chemistry Series, 226:181-193 (1990).		
	C31	Durham, B., et al., "Photoinduced Electron-Transfer Kinetics of Singly Labeled Ruthenium Bis(bipyridin) Dicarboxybipyridine Cytochrome c Derivatives," Biochemistry, 28:8659-8665 (1989).		


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G	C32	Elghanian et al., "Selective Colorimetric Detection of Polynucleotides Based on the Distance-Dependent Optical Properties of Gold Nanoparticles," Science, 277:1078-1081 (1997).		
	C33	Elias, H., et al., "Electron-Transfer Kinetics of Zn-Substituted Cytochrome c and Its Ru(NH3)5(Histidine-33) Derivative," J. Am. Chem. Soc., 110:429-434 (1988).		
	C34	Fotin, A. et al., "Parallel Thermodynamic Analysis of Duplexes on Oligodeoxyribonucleotide Microchips," Nucleic Acids Research, 216(6):1515-1521 (1998).		
	C35	Fox, L. S., et al., "Gaussian Free-Energy Dependence of Electron-Transfer Rates in Iridium Complexes," Science, 247:1069-1071 (1990).		
	C36	Fox, M. A., et al., "Light-Harvesting Polymer Systems," C&EN, pages 38-48 (March 15, 1993).		
	C37	Francois, J.-C., et al., "Periodic Cleavage of Poly(dA) by Oligothymidylates Covalently Linked to the 1,10-Phenanthroline-Copper Complex," Biochemistry, 27:2272-2276 (1988).		
	C38	Fromherz, P., et al., "Photoinduced Electron Transfer in DNA Matrix from Intercalated Ethidium to Condensed Methylviologen," J. Am. Chem. Soc., 108:5361-5362 (1986).		
	C39	Gardner, et al., "Application of conducting polymer technology in microsystems," Sensors and Actuators, A51:57-66 (1995).		
	C40	Gregg, B. A., et al., "Cross-linked redox gels containing glucose oxidase for amperometric biosensor applications," Anal. Chem., 62:258-263 (1990).		
	C41	Gregg, B. A., et al., "Redox Polymer Films Containing Enzymes. 1. A Redox-Conducting Epoxy Cement: Synthesis, Characterization, and Electrocatalytic Oxidation of Hydroquinone," J. Phys. Chem., 95:5970-5975 (1991).		
	C42	Guschin, D. et al., "Manual Manufacturing of Oligonucleotide, DNA, and Protein Microchips," Analytical Biochemistry, 250:203-211 (1997).		
	C43	Guschin, D. et al., "Oligonucleotide Microchips as Genosensors for Determinative and Environmental Studies in Microbiology," 63(6):2397-2402 (1997).		
	C44	Hashimoto, et al., "Sequence-Specific Gene Detection with a Gold Electrode Modified with DNA Probes and an Electrochemically Active Dye," Anal. Chem. 66:3830-3833 (1994).		
	C45	Hegner, et al., "Immobilizing DNA on gold via thiol modification for atomic force microscopy imaging in buffer solutions," FEBS 336(3):452-456 (1993).		
	C46	Heller et al., "Fluorescent Energy Transfer Oligonucleotide Probes," Fed. Proc. 46(6):1968 (1987) Abstract No. 248.		
↓	C47	Heller, A., "Electrical Wiring of Redox Enzymes," Acc. Chem. Res., 23:128-134 (1990).		
	C48	Heller, A., et al., "Amperometric biosensors based on three-dimensional hydrogel-forming epoxy networks," Sensors and Actuators, 13-14:180-183 (1993).		
	C49	Hess et al., "Base Pairing Properties of Novel Transition Metal PNA Conjugates," Journal of Inorganic Biochemistry, 74:161 (1999).		
	C50	Hess et al., "Base Pairing Properties of Novel Transition Metal PNA Conjugates," Journal of Inorganic Biochemistry, 74: (1999).		
	C51	Ho "DNA-Mediated Electron Transfer and Application to 'Biochip' Development," Abstract. Office of Naval Research (Report Date: July 25, 1991) 1-4, RR04106.		

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G	C52	Hobbs et al., "Polynucleotides Containing 2'-Amino-2'-deoxyribose and 2'-Azido-2'-deoxyribose," Biochemistry, 12(25):5138-5145 (1973).		
	C53	Hsung, et al., "Synthesis and Characterization of Unsymmetric Ferrocene-Terminated Phenylethynyl Oligomers," Organometallics, 14:4808-4815 (1995).		
	C54	Hsung, et al., "Thiophenol Protecting Groups for the Palladium-Catalyzed Heck Reaction: Efficient Syntheses of Conjugated Arylthiols," Tetrahedron Letters, 36(26):4525-4528 (1995).		
	C55	Ihara et al., "Gene sensor using ferrocenyl oligonucleotide," Chem. Commun., 1609-1610 (1997).		
	C56	Jenkins et al., "A Sequence-Specific Molecular Light Switch: Tebhering of an Oligonucleotide to a Dipyrrophenazine Complex of Ruthenium (II), J. Am. Chem. Soc., 114:8736-8738 (1992).		
	C57	Johnston et al., "Trans-Dioxorhenium(V)-Mediated Electrocatalytic Oxidation of DNA at Indium Tin-Oxide Electrodes: Voltammetric Detection of DNA Cleavage in Solution," Inorg. Chem., 33:6388-6390 (1994).		
	C58	Kamat et al., J. Phys. chem., 93(4):1405-1409 (1989). Abstract		
	C59	Katritzky, et al., "Pyridylethylation - A New Protection Method for Active Hydrogen Compounds," Tetrahedron Letters, 25(12):1223-1226 (1984).		
	C60	Kelley, S.O. and J.K. Barton, "Electrochemistry of Methylene Blue Bound to a DNA-Modified Electrode," Bioconjugate Chem., 8:31-37 (1997).		
	C61	Kojima et al., "A DNA Probe of Ruthenium Bipyridine Complex Using Photocatalytic Activity," Chemistry Letter, pp 1889-1982 (1989).		
	C62	Korri-Youssefi et al., "Toward Bioelectronics: Specific DNA Recognition Based on an Oligonucleotide-Functionalized Polypyrrole," J. Am. Chem. Soc., 119(31):7388-7389 (1997).		
	C63	Langen et al., "Electron Tunneling in Proteins: Coupling Through a $\beta$ Strand," Science, 268:1733-1735, 1995.		
	C64	Laviron, E., "A.C. Polarography and Faradaic Impedance of Strongly Adsorbed Electroactive Species. Part I: Theoretical and Experimental Study of a Quasi-Reversible Reaction in the Case of a Langmuir Isotherm," J. Electroanal. Chem., 97:135-149 (1979).		
	C65	Laviron, E., "A.C. Polarography and Faradaic Impedance of Strongly Adsorbed Electroactive Species. Part III: Theoretical Complex Plane Analysis for a Surface Redox Reaction," J. Electroanal. Chem., 105:35-42 (1979).		
	C66	Lee, et al., "Direct Measurement of the Forces Between Complementary Strands of DNA," Science, 266:771-773 (1994).		
	C67	Lenhard, J.R., et al., "Part VII Covalent Bonding of a Reversible- Electrode Reactant to Pt Electrodes Using an organosilane Reagent" J. Electroanal. Chem., 78:195-201 (1977).		
	C68	Lincoln et al., "Shorting Circuiting the Molecular Wire," J. Am. Chem. Soc., 119(6):1454-1455 (1997).		
	C69	Lipkin "Identifying DNA by the Speed of Electrons," Science News, 147(8):117 (1995).		
	C70	Livshits, M. et al., "Theoretical Analysis of the Kinetics of DNA Hybridization with Gel-Immobilized Oligonucleotides," Biophysical Journal, 71:2795-2801 (1996).		
	C71	Maskos, et al., "Oligonucleotide hybridisations on glass supports: a novel linker for oligonucleotide synthesis and hybridisation properties of oligonucleotides synthesised in situ," Nucleic Acids Research, 20(7):1679-1684 (1992).		

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G	C72	McGee et al., "Novel Nucleosides via Intramolecular Functionalization of 2,2'-Anhydrouridine Derivatives," Tetrahedron Letters, 37(12) 1995-1998 (1996).	
	C73	McGee, et al., "2'-Amino-2'-deoxyuridine via an Intramolecular Cyclization of a Trichloroacetimidate," J. Org. Chem., 61:781-785 (1996).	
	C74	Meade, T. J., "Driving-Force Effects on the Rate of Long-Range Electron Transfer in Ruthenium-Modified Cytochrome c," J. Am. Chem. Soc., 111:4353-4356 (1989).	
	C75	Meade, T. J., et al., "Electron Transfer through DNA: Site-Specific Modification of Duplex DNA with Ruthenium Donors and Acceptors," Angew Chem. Int. Ed. Engl., 34:352-354 (1995).	
	C76	Mestel, "Electron Highway' Points to Identity of DNA," New Scientist, p. 21 (1995).	
	C77	Millan, et al., "Voltammetric DNA Biosensor for Cystic Fibrosis Based on a Modified Carbon Paste Electrode," Anal. Chem., 66:2943-2948 (1994).	
	C78	Millan, K.M. and Mikkelsen, S.R., "Sequence-Selective Biosensor for DNA Based on Electroactive Hybridization Indicators," Anal. Chem., 65:2317-2323 (1993).	
	C79	Millan, K.M., et al., "Covalent Immobilization of DNA onto Glassy Carbon Electrodes," Electroanalysis, 4(10):929-932 (1992).	
	C80	Miller, C., "Absorbed $\gamma$ -Hydroxy Thiol Monolayers on Gold Electrodes: Evidence for Electron Tunneling to Redox Species in Solution," J. Phys. Chem., 95:877-886 (1991).	
	C81	Mirkin et al., "A DNA-based Method for Rationally Assembling Nanoparticles into Macroscopic Materials," Nature, 382:607-609 (1996).	
	C82	Mirzabekov, A. et al., "Dna Sequencing by Hybridization - a Megasequencing Method and a Diagnostic Tool," Tibtech, 12:27-32 (1994).	
	C83	Mitchell et al., "Programmed Assembly of DNA Functionalized Quantum Dots," J. Am. Chem. Soc., 121:8122-8123 (1999).	
	C84	Moffatt, "Chemical Transformations of the Sugar Moiety of Nucleosides," 1979	
	C85	Mucic et al., "DNA-Directed Synthesis of Binary Nanoparticle Network Materials," J. Am. Chem. Soc., 120:12674-12675 (1998).	
	C86	Mucic et al., "Synthesis and Characterization of DNA with Ferrocenyl Groups Attached to their 5'-Termini: Electrochemical Characterization of a Redox-Active Nucleotide Monolayer," Chem. Commun., pp. 555-557 (1996).	
	C87	Mucic et al., "Synthesis and Characterization of DNA with Ferrocenyl Groups Attached to their 5'-Termini: Electrochemical Characterization of a Redox-Active Nucleotide Monolayer," Chem. Commun., pp. 555-557 (1996).	
	C88	Murphy, C. J., et al., "Long-Range Photoinduced Electron Transfer Through a DNA Helix," Science, 262:1025-1029 (1993).	
	C89	Mutz et al., "Conformational dependence of electron transfer across de novo designed metalloproteins," Proc. Natl. Acad. Sci. USA, 93:9521-9526, 1996.	
	C90	Napier et al., "Probing biomolecule recognition with electron transfer: electrochemical sensors for DNA hybridization," Bioconjugate Chem. 8: 906-913 (1997).	
C91	Orellana, G., et al., "Photoinduced Electron Transfer Quenching of Excited Ru(II) Polypyridyls Bound to DNA: The Role of the Nucleic Acid Double Helix," Photochemistry and Photobiology, 54(4):491-499 (1991).		
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G	C92	Palecek, "From Polarography of DNA to Microanalysis with Nucleic Acid-Modified Electrodes," Electroanalysis, 8(1):7-14 (1996).		
	C93	Parinov, S., "DNA Sequencing by Hybridization to Microchip octa- and Decanucleotides Extended by Stacked Pentanucleotides," Nucleic Acids Research, 24(15):2998-3004 (1996).		
	C94	Paterson, "Electric Genes: Current Flow in DNA Could Lead to Faster Genetic Testing," Scientific American, 33 (May 1995).		
	C95	Proudnikov, D. "Immobilization of DNA in Polyacrylamide Gel for the manufacture of DNA and DNA-Oligonucleotide Microchips," Analytical Biochemistry, 259:34-41 (1998).		
	C96	Proudnikov, D. et al., "Chemical Methods of DNA and RNA Fluorescent Labeling," Nucleic Acids Research, 24(22):4535-4542 (1996).		
	C97	Purugganan, M. D., et al., "Accelerated Electron Transfer Between Metal Complexes Mediated by DNA, Science, 241:1645-1649 (1988).		
	C98	Reimers et al., "Toward Efficient Molecular Wires and Switches: the Brooker Ions," Biosystems, 35:107-111 (1995).		
	C99	Rhodes, D. And A. Klug, "Helical Periodicity of DNA Determined by Enzyme Digestion," Nature, 286:573-578 (1980).		
	C100	Risser, S. M., et al., "Electron Transfer in DNA: Predictions of Exponential Growth and Decay of Coupling with Donor-Acceptor Distance," J. Am. Chem. Soc., 115(6):2508-2510 (1993).		
	C101	Sato, Y., et al., "Unidirectional Electron Transfer at Self-Assembled Monolayers of 11-Ferrocenyl-1-undecanethiol on Gold," Bull. Chem. Soc. Jpn., 66(4):1032-1037 (1993).		
	C102	Satyanarayana, S., et al., "Neither $\gamma$ - nor $\gamma$ -Tris(phenanthroline)ruthenium(II) Binds to DNA by Classical Intercalation," Biochemistry, 31(39):9319-9324 (1992).		
V	C103	Schreiber, et al., "Bis(purine) Complexes of trans-a2Plll: Preparation and X-ray Structures of Bis(9-methyladenine) and Mixed 9-Methyladenine, 9-Methylguanine Complexes and Chemistry Relevant to Metal-Modified Nucleobase Triples and Quartets," J. Am. Chem. Soc. 118:4124-4132 (1996).		
	C104	Schuhmann, W., et al., "Electron Transfer between Glucose Oxidase and Electrodes via Redox Mediators Bound with Flexible Chains to the Enzyme Surface," J. Am. Chem. Soc., 113:1394-1397 (1991).		
	C105	Schumm, et al., "Iterative Divergent/Convergent Approach to Linear Conjugated Oligomers by Successive Doubling of the Molecular Length: A Rapid Route to a 128 $\gamma$ -Long Potential Molecular Wire," Angew. Chem. Int. Ed. Engl., 33(11):1360-1363 (1994).		
	C106	Sigal et al., "A Self-Assembled Monolayer for the Binding and Study of Histidine-Tagged Proteins by Surface Plasmon Resonance," Anal. Chem., 68(3):490-497 (1996).		
	C107	Sloop et al., "Metalloorganic labels for DNA sequencing and mapping," New. J. Chem., 18: 317-326 (1994).		
	C108	Southern, et al., "Arrays of complementary oligonucleotides for analysing the hybridisation behaviour of nucleic acids," Nucleic Acids Research, 22(8):1368-1373 (1994).		
	C109	Storhoff et al., "One-Pot Colorimetric Differentiation of Polynucleotides with Single Base Imperfections Using Gold Nanoparticles Probes," J. Am. Chem. Soc., 120:1959-1964 (1998).		
	C110	Strobel, S. A., et al., "Site-Specific Cleavage of a Yeast Chromosome by Oligonucleotide-Directed Triple-Helix Formation," Science, 249:73-75 (1990).		

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			Application Number	10/823,502	
			Filing Date	April 12, 2004	
			First Named Inventor	TAO, Chunlin	
			Art Unit	1645	
			Examiner Name	FREDMAN, Jeffrey N.	
Sheet	11	of	12	Attorney Docket Number	A-69306-2 (463037-00324)

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Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		
	C111	Su, et al., "Interfacial Nucleic Acid Hybridization Studied by Random Primer 32P Labelling and Liquid-Phase Acoustic Network Analysis," Analytical Chemistry, 66(6):769-777 (1994).		
	C112	Telser, J., et al., "DNA Duplexes Covalently Labeled at Two Sites: Synthesis and Characterization by Steady-State and Time-Resolved Optical Spectroscopies," J. Am. Chem. Soc., 111:7226-7232 (1989).		
	C113	Telser, J., et al., "DNA Oligomers and Duplexes Containing a Covalently Attached Derivative of Tris(2,2'-bipyridine)ruthenium(II): Synthesis and Characterization by Thermodynamic and Optical Spectroscopic Measurements," J. Am. Chem. Soc., 111:7221-7226 (1989).		
	C114	Timofeev, E. et al., "Methidium Intercalator Inserted into Synthetic Oligonucleotides," Tetrahedron Letters, 37(47):8467-8470 (1996).		
	C115	Timofeev, E. et al., "Regioselective Immobilization of Short Oligonucleotides to Acrylic Copolymer Gel," Nucleic Acids Research, 24(16): 3142-3148 (1996).		
	C116	Tour, "Conjugated Macromolecules of Precise Length and Constitution. Organic Synthesis for the Construction of Nanoarchitectures," Chem. Rev., 96:537-553 (1996).		
	C117	Tour, et al., "Self-Assembled Monolayers and Multilayers of Conjugated Thiols, γ-γ-Dithiols, and Thioacetyl-Containing Adsorbates. Understanding Attachments between Potential Molecular Wires and Gold Surfaces," J. Am. Chem. Soc., 117:9529-9534 (1995).		
	C118	Tullius, T.D. and B.A. Dombroski, "Iron(II) EDTA Used to Measure the Helical Twist Along Any DNA Molecule," Science, 230:679-681 (1985).		
	C119	Turro, N. J., et al., "Molecular Recognition and Chemistry in Restricted Reaction Spaces. Photophysics and Photoinduced Electron Transfer on the Surfaces of Micelles, Dendrimers, and DNA," Acc. Chem. Res., 24:332-340 (1991).		
	C120	Turro, N., et al. "Photoelectron Transfer Between Molecules Adsorbed in Restricted Spaces," Photochem. Convers. Storage Sol. Energy, Proc. Int. Conf., 8th, pp 121-139 (1990).		
	C121	Uosake, K., et al., "A Self-Assembled Monolayer of Ferrocenylalkane Thiols on Gold as an Electron Mediator for the Reduction of Fe(III)-EDTA in Solution," Electrochimica Acta., 36(11/12):1799-1801 (1991).		
	C122	Van Ness, J., et al., "A Versatile Solid Support System for Oligodeoxynucleotide Probe-Based Hybridization Assays," Nucleic Acids Research, 19(12):3345-3350 (1991).		
	C123	Velez et al., "In Situ Assembly of Colloidal Particles into Miniaturized Biosensors," The ACS Journal of Surfaces and Colloids, Langmuir, 15(11):3693-3698 (1999).		
	C124	Watson et al., "Hybrid Nanoparticles with Block Copolymer Shell Structures," J. Am. Chem. Soc., 121:462-463 (1999).		
	C125	Weber, et al., "Voltammetry of Redox-Active Groups Irreversibly Adsorbed onto Electrodes. Treatment Using the Marcus Relation between Rate and Overpotential," Anal. Chem., 66:3164-3172 (1994).		
	C126	Williams, et al., "Studies of oligonucleotide interactions by hybridisation to arrays: the influence of dangling ends on duplex yield," Nucleic Acids Research, 22(8):1365-1367 (1994).		
	C127	Winkler, J. R., et al., "Electron Transfer in Ruthenium-Modified Proteins," Chem. Rev., 92:369-379 (1992).		
	C128	Xu, et al., "Immobilization and Hybridization of DNA on an Aluminum(III) Alkanebisphosphonate Thin Film with Electrogenenerated Chemiluminescent Detection," J. Am. Chem. Soc., 117:2627-2631 (1995).		
	C129	Xu, et al., "Immobilization of DNA on an Aluminum(III) alkanebisphosphonate Thin Film with Electrogenenerated Chemiluminescent Detection," J. Am. Chem. Soc., 116:8386-8387 (1994).		

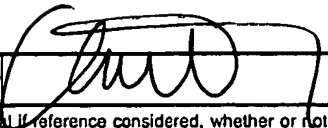
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G ↓ ↓ ↓	C130	Yang, et al., "Growth and Characterization of Metal(II) Alkanecobisphosphonate Multilayer Thin Films on Gold Surfaces," J. Am. Chem. Soc., 115:11855-11862 (1993).		
	C131	Yershov, G. et al., "DNA Analysis and Diagnostics on Oligonucleotide Microchips," Proc. Natl. Acad. Sci. USA, 93:4913-4918 (1996).		
	C132	Yu et al. "Uridine-conjugated-ferrocene DNA oligonucleotides for electronic detection of nucleic acids," Abstracts of Papers. ACS National Meeting, 217(1): 76 (1999).		
	C133	Zhou, et al., "Fluorescent Chemosensors Based on Energy Migration in Conjugated Polymers: The Molecular Wire Approach to Increased Sensitivity," J. Am. Chem. Soc., 117:12593-12602 (1995).		

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